

11 Publication number:

0 401 384 A1

(2)

EUROPEAN PATENT APPLICATION published in accordance with Art. 158(3) EPC

- 2) Application number: 90900360.0
- ② Date of filing: 22.12.89
- International application number: PCT/JP89/01292
- (gr) International publication number: WO 90/06952 (28.06.90 90/15)
- Priority: 22.12.88 JP 324747/8831.07.89 JP 199176/89
- Date of publication of application: 12.12.90 Bulletin 90/50
- Designated Contracting States:
 AT BE CH DE ES FR GB IT LI LU NL SE

(9) Int. Cl.5: C07K 13/00, C07K 3/08, A61K 37/02

- Applicant: Kirin-Amgen, Inc.
 1900 Oak Terrace Lane
 Thousand Caks California 91320(US)
- Inventor: ISHIKAWA, Rika 36-2, Takagi 1-chome Higashiyamato-shi Tokyo 189(JP) Inventor: OKADA, Yuji 391, Kamikoide-machi Maebashi-shi Gunma-ken 371(JP) Inventor: KAKITANI, Makoto 391, Kamikoide-machi Maebashi-shi Gunma-ken 371(JP)
- Representative: Brown, John David FORRESTER & BOEHMERT Widenmayerstrasse 4/I D-8000 München 22(DE)
- CHEMICALLY MODIFIED GRANULOCYTE COLONY STIMULATING FACTOR.

This invention provides a chemically modified protein prepared by combining polyethylene glycol with a polypeptide having substantially the following amino acid sequence and comprising the product of manifestation by a host cell of a foreign DNA sequence (1), wherein n is 0 or 1. This protein has a more lasting action of increasing neutrophils than that of the human granulocyte colony stimulating factor (G-CSF) known heretofore.

品

BEST AVAILABLE COPY